Wifteenth Meeting of the American Association for the Advancement of Science.

Dur Special Correspondent. BUFFALO, Aug. 17, 1868. My report of the proceedings in section A closed on a new Chemical Nomemelatore. The nomenclature pro-posed by the Professor is adapted to the typical classification

ment consonant; arsenic and teleurium, classed by mists among the metalloids are by this arrangement

Fight. The number of atoms of any element is designated by a wowei immediately preceding the terminal consonant. The numerical power of the voweis advancing with the order in which they are placed in the alphabet; thus: 1, 2, 3, 4 and 5 are represented by a, e, 1, o and u, each having a stopped sound, and the same vowels each preceded by e, and having the long or foll sound, represent 6, 7, 8, 2 and 10. Other letters represent higher numbers so that they number to 1,000 is readily denoted.

The following metalloids are represented by their

es, etc.

ch. The manner of uniting these syllables may be thus
the the protoxide of iron, Ferramer; the sesqui exide
Ferramer; the black or magnetic exide, Ferrimar; sulof protoxide of iron, Ferramisor; sulphate of sesqui of

Third DAY.

The Association has now got innivito work and is making od disposition of the papers. The attendance upon the accusa of the sections shows no diminution in the interest felt in

ociation then adjourned to meet in sections. SECTION A.

on interesting account of the telescopic observa-

tions he had made.

President Barnard then gave the following history of the great telescope of the Dearborn Observatory: The Dearborn Observatory of Chicago or rights and in some steps takes by citizens of that place to procure a large telescope. After consulting with Prof. Bolinow the well-known object-glass made by Messes. A. Clark & Sons, of 18; inches aperture, was procured, and the funds for a build ag promised by the Hon. Jak. Seaumon, whose munificance has very greatly surpassed the original estimate of \$10,000.

The object glass was originally ordered by the honeyed.

al estimate of \$10,000, was originally ordered by the honored splent of this Association for the University of Mississippi, sich be was then the head.

6 Observatory is situated in the City of Chicago, near the Shore, about 34 miles south of the mouth of Chicago, where is the center of bisiness. It forms the western you the University. The telescoper-room has something 30 feet inside disagrees, and its floor is 66 feet from the contract of the test high the honor 96 feet.

companion to the large Equatorial is a

posed to empty it in determining absolute passes the originary nebults many of which will come within the reach of its optical power (six French inches appriare), beside other independent is avastizations of inches appriare), beside other independent is avastizations of inches appriare), beside other independent is avastizations of increase. He is the first of a paper by Prof. R. B. Editor. The paper exhibited recearch in regard to the law of electric currents, but being so purely mathematical and depending so centrely upon illustrations it is imporsable to make an inteduction for the general reader, and quite as difficult to convey to scientific persons a proper idea in regard to it.

"The Effect of Sunshine on Fire," was read by Prof. Horeford. The paper was long and very interesting.

The best on took a recess until 35 o'clock p. m.

ATTERNOON SESSION.

"Remarks on the Now.Mettand of Automatic Registration of Mateorological Phenomena," was the title of the paper read by Prof. G. W. Horagh, Prof. Honab gave a very interesting account of a registering and pointing barometer in operation at the Dudley Observatory in Chleago. This instrument recents with uncertaing accuracy fluctations in the atmospheric waves to onesticons and part of an inch.

"On the Primeyal Atmosphere," was the subject presented for the consideration of the Section by Dr. T. Sterry Hunt.

Dr. L. Brondley then read an interesting paper on the "Anthasometer," describing a new electrical instrument for contents of the proper state and regulating the flow of a current of electricity. It has been employed, under different forms, by philosophera and professors to prove theories and establish principles. I have enlarged its field of usefulness in making in atmig of every day spractical utility in business. The improved rheosiat and the improved tangent galvanometer here axidiated taken together, constitute an instrument for conveniently determining and correctly measuring the resistance which conductors of electricity oppose to the free propagatio

Astaconseter, from the Greek denoting a measure of resistance.

This instrument I have in common use, and, in my business in relation to telegraphy, I have made it what the scale beam regardetic is in commerce. I have adopted the practice of measuring and marking the resistance of all the magnets I put apon the market, which enables telegraph superintendents to arrange, and adopt their magnets to the several parts of lines can be secure the greatest economy in their use, which is a matter of very great importance. I make the rheostat daily assulul, also, in comparing magnets and ascertaining their relative working qualities.

He then stated the principles of his discoveries, and described the instrument in detail.

RECTION B.

relative working qualities.

He then stated the principles of his discoveries, and described the instrument in detail.

EECTION B.

ATURAL SCIENCES.

Dr. Winehall read a paper prepared by Prof. Swallow, on the rocks of Kanssa, giving an interesting account of the Professor's explorations in that section. The paper was discussed briefly by Proft. Newberry and Hall.

A paper by Prof. Hunt entitled "Remarks on the Laurentian Limestones and their Minerialogy," was then presented, it was the Origin of Prairies, "was a paper contributed by Prof. 4. S. Newberry. The Professor remarked that great discussive the Origin of Prairies," was a paper contributed by Prof. 5. S. Newberry. The Professor remarked that great discussive opinion existed as to the causes which had profused over half our confinent a growth of forests, and over the other half only an herbacious regretation, but in this, as in so many other questions that divided this scientific world, if the disputants could meet on common ground, and each study the phenomena observed by others, and not exclusively his own data, there would be comparatively very little discord. He had speat some years on the prairies in various parts of the far West, and he felt confident that any one who would go over the ground he had treversed would agree with him that the greeness or absence of forests, as a general rule, depended on the amount of precipitated moisture. The central portions of this continent, as others, was comparatively dry, and was consequently treeless, except on the mountain belts, which and send successor of the far when the properties of the continent as others, was comparatively dry, and was consequently treeless, except on the mountain belts, which and a social profits of the continent as others, was comparatively dry, and was consequently treeless, except on the mountain belts, which and their feet of the continent early of the continent early of the continent early of the first steps of the first steps of the first steps of the first steps of the first st

Lave Michigas boing a body of water 350 miles long, and.

on an average, 75 miles broad, with a depth of about 900 feet is enabled to preserve annething of that uniformity of temporature which characteries the ocean; and exerts a similar influence upon the contiguous lands. The temperature of the water in the open like never rises above 450 or 50% and probably does not sink below 350 or 40%. The great body of the like is rever frozen over. The winds moving over its surface are consequently warmed in cold weather and cooled in warm weather. As the prevailing direction of the wind, both Summer and Winter, is from the westerly points of the compass, the influence of the lake is most extensively felt along the eastern or Michigan shore. The amount of this influence diminishus toward the interior, but is distinctly felt in extreme weather in all parts of the State. The region of country along the lake, however, for a distance inland which may be put at about 40 miles, enjoys a climate of a decidedly local character. The amount of this influence, and its importance upon the agricultural economy of the State. The region of country along the lake, however, for a distance induce me to make upon the agricultural economy of the State, induceme to make upon the agricultural economy of the State, induceme to make upon the agricultural economy of the State, induceme to make upon the sentemp protion of this belt, from St. Joseph to the Grand Traverse-Region. The contrast in the crops and general vegetation, however, on the opposite shores of the lake, corresponds to a very considerable difference in the extremes of the climates. When the thermometer is 400 below zero at Janesville, in Wiscomsin, it is 500 below at Chicago, and 200 Janesville, in Wiscomsin, it is 500 below at Chicago, and 200 below at Kalaimezoe, 45 miles cast of the southern portion of the belt under consideration, reliable meserological statistics have been proserved. This region is known as the Grand Traverse Region, and lies ground the bay of that mane—a navigable erm of Lake Michigan projecting outhward into the

In the month of February Manitowoo is half a degree varmer than Traverse City: Hazlewood, 104° colder, St. Johnshary, 9,0°, Gardiner, 44°, Montreal, 6°, Ann Arbor, 4°; fanesville, 4°, Dubaque, 9°. In the month of March the mean of the more sont fern lo-

the bay.

It is the extremes of Winter temperators which produce such frequent destruction of the more collecte varieties of fruit trees. On comparing the saints of the several places for the cold months of the year we obtain the following result: In December the mean minimum of Manitowoe is 4° lower than at Traverse City; of Hazlewood, 15° lower, of St. Johnsbury, 25°, of Gardiner, 13°, of Montreal, 15°; of Aun Arbor, 1°, of Janesville, 81°, of Montreal, 15°, of Aun Arbor, 1°, of Janesville, 81°, of Montreal, 15°, of Aun Arbor, 1°, of Janesville, 81°, of Hazlewood, 15°, of St. Johnsbury, 17°, of Montreal, 15°, of Aun Arbor, 51°, of Gardiner, 1°, 1°, of Montreal, 15°, of Aun Arbor, 51°, of Janesville, 17°, of Dubuque, 3°.

In February the mean minimum of Manitowoe for the years compared is 3° higher than at Traverse City, of Hazlewood, 10° lower, of St. Johnsbury, 14° lower, of Gardiner, 1° higher, of Montreal, 89° lower, of Ann Arbor, the same; of Janesville, 13° lower, of Dubuque, 1° lower.

The mean minimum of March is lower for every one of the places compared with Traverse City.

The favorable character of the olimate of Traverse City is pleased in a still stronger light if we compare the extreme minimum for a series of years. The mean minimum may be of moderate severity, while on one or two occasions in the course of the Winter, or still more likely within a range of fire or extreme minimum of March December, 10° lower; of Hazlewood, 28°; of St. Johnsbory, 28°; of Gardiner, 19°; of Montreal, 28°; of Ann Arbor, 3°; of Janesville, 14°; of Dubugue, 10°.

In Janesy the extreme minimum of Manitowoe is 8° lower than at Traverse City; of Hazlewood, 16°; of St. Johnsbory, 28°; of St. Johnsbory, 28 ory the extreme missimum of Manitowoo is 82 lower

bunne, 19².

In Janeary the extreme minimum of Manitowoo is 8² lower than at Traversa City; of Hazhewood, 18²; of St. Johnsbury, 26²; of Gardiner, 18²; of Montreal, 16²; of Ann Arbor, 16²; of Janeaville, 15²; of Dibbaque, 6².

In February, the extreme minimum of Manitowoo is 8³ lower than at Traversa City; of Hazhewood, 18³; of St. Johnsbury, 26²; of Gardiner, 18³; of Montreal, 16³; of Ann Arbor, 10³; of Gardiner, 18³; of Gardiner, 18³; of Gardiner, 18³; of Gardiner, 19³; of Gardiner, 29³; of Montreal, 18³; of St. Johnsbury, 16³; of Gardiner, 29³; of Montreal, 27³; of Ann Arbor, 19³ higher; of Janeaville 29³ lower; of Dabaque 29³ lower.

It thus appears that ender every point of view the Winter climate of Traversa City is materially miller than that of other places in the same latitude either east or weat. It is materially miller than that of the places in the same latitude either east or weat. It does not reach the point at which peach trees are injured, and in this respect, the Winter chanse companies favorably with that of middle Ohlo, Indiana, and Hinols, Indeed, the Winter extremes for ten years past, during which peach trees have been growing in the Grand Traversa region, have been less than at Cincinnati or St. Louis, or even Mamphia in Tennessee. During the memorable "cold spell of New Years, 18⁴6, "the 19⁴1.

schools of Newton, the control of th

"The Grand Traverse Region:" br A. Winahell 1886.

trees were laden with fruit in the middle of July of this year, though both crops are a complete failure through the eastern part of the State, and as far south as Tennessee, according to my own observation. Still further north, in the Grand Traverse region, it seems to be completely demonstrated that these fruits are destined to be as successfully cultivated as in the St. Joseph region. As a fruit-growing region, I doubt whether any other portion of the United States, east of the Rocky Mountains, will be able to compete with it. It has been a complete surprise to the inhabitants to learn that peaches, apples, grapes, pears, raspberries, strawberries and other fruits can be cultivated with success. The discovery has given a wonderful impetus to this branch of enterprise; and unless my judgmant greatly misleads me, you will hear of the Grand Traverse region, within 10 years, as the fruit orchard of the country, and shrowd men with horticultural tastes and a moderate amount of means, will thank me for directing attention to this open avenue to wealth.

Ass Arbor, Mich., August, 1866.

AFTERNOON SESSION.

open arenue to wealth.

Ann drbor, Mich., August, 1966.

AFERISON SESSION.

The seption "struck oil" this afternoon in a paper by Prof. T. Sterry Hunt, entitled "On Petroleum." The speaker adverted to the bistory of certain views relative to petroleum. He had shown in 1861 that the mineral oil of Western Canada was indigenous in the carniferous linestone, wells sunk in the ontoroy of which have yielded, and still yield, oil in that region, and also in Kentucky, according to Leslie. At that time (1861) he called attention to the existence of petroleum in the limestones of the Trenton group, and had, since then, in the geology of Canada in 1863, insisted upon these lower Silurian oils as likely to prove, in some regions, of economic importance—a prediction verified by the recent developments in the lower Silurian strata cf the Cumberland, in Kentucky, and the oil weils of the Manitoulin Islands, which latter are sunk through the Utica and Trenton formation. Another important point on which he had been the first to insist, was that the accumentation giving rise to productive wells occur along the lines of anticilimal folds, where the oil would naturally accumulate in fissures or in porous struta, in obedience to well known hydrostatic laws. This view, first insisted upon in a letter published in The Medical Garatte for March 1861, was further developed in a paper on Petroleum in The Canadian Neutralist for July, 1861, and simultaneously by Prof. E. B. Andrews, in Siliness Journal. Since then this view, though frequently opposed, is gaining ground, and according to Prof. Andrews and Dr. Newberry, is attented by all experience in the oil fields of the United States, as it also is in Canada. This remark applies to large hecumulations and to flowing wells, but oil may doubtless flow slowly from horizontal strata containing it.

As to the origin of petroleum, Dr. Hong Supposes that it is indigenous in the two linestone formations already mentioned, and that it may have from there risen and accumulated in over lying pro

Fravel beds.

He is inclined to think, however, that petroleum may also be Indigenous in certain sandstones of devoncan or carboniferous age, and referred to Lealey's observations to this effect, closely agreeing with those of Wall and Grager in Trimhala, where feast plants are sometimes found partly converted into petroleum and partly into lignite. Dr. Hunt regards the process by which animal and regetable and hydrocarbonaceous tissues have been converted into acid and liquid bitumen, as a decay or fermentation under conditions in which atmospheric cay-genation is excluded, so that the maximum amount of hydrogen is retained by the earbon; and as representing one extreme of a process, the other of which is found in arthracite and mineral charcoal, the two conditions being antagonistic and excluding each other, and the production of portoleum implying, when complete, the disappearance of organic tissue. Hence proschists, the so called bituminous abales, and coul are not found together with petroleum, but in soparate fermations, and it is to be borne in mind that the epithed bituminous applied to the former bodies is a mistaken one, since they seldom or never contain any bitumen, although like all fixed organic bodies they yield hydrocarbons by destructive distillation. The fallacy of the notion which ascribes petroleum to the action of subterroanean heat on strata holding coal and pyroschists was exposed, and it was remarked among other arguments founded upon the lapermeability of many of the petroleum bearing strata, that the oil of the Trenton limestone occurs below the herizon of any pyroschists or other hydrocarbonaceous rocks.

"On the Structure of the Spires in the Genera Athysis and Meristella," by Prefessor James Hall, is the title of a peper read in this section.

Mr. Hall remarked that in the study of the fossil Brachioravel beds. He is inclined to think, however, that petroleum may also be

tions.

All the genera of the family Spirifridae are provided with internal spires, the general features of which were illustrated by a diagram of the spires in Spirifridae proper.

In Athysis, the creeva proceeding from the higge plate of the dorsal valve extended forward for a short distance into the cavity of the shell, and were then abruptly recurved into the cavity of the dorsal valve, and thence continued in their spiral convolutions, which centered to the general outline of the shell. But there are certain appendages or intercolated lamelle which are peculiar and characteristic. On the first turn of the spiral lamelle into the cavity of the dorsal valve, and mear the point of its greatest depression, there arises a slender process from each of the adjacent is melies, which, saing upward and including, are united in a solid plate. This appendage is called the connecting loop, and in Spirifere and other genera of this family is simple, but in Athysis the spec of this loop is projected backward, and then divided, forming two accessory lamelles which, diverging to the right and left, are intercolated between the first and second turns of the normal lamelle of the spire. These accessory or intercolated lamelle project backward and assume the same general curvature as the other parts of the spire, make about half a volution, and are naticed to the purpose tamelles in the bottom of the cavity of the dorsal

intion assembled in St. James's Hall this even-ion to a cology on the Scientific and Religious Edward Hitchcock, by Mrs. Almira Lincoln timore. There were about 1,000 persons pres-helps said: ussembling of the American Association for the tof Science of the American Association for the

YOUTHFUL BURGLARS.—On the night of August 4 the cigar store of Jose Xiques, No. 372 Canal-st., was entered by breaking a pane of glass, removing the catches, and then raising the window, and \$70 in legal tender and fractional currency and a knife stolen. Yesterday the proprietor of the store saw the stolen knife in the possession of a boothleak named John Seward, and caused his arrest by Officer Lowenthal of the Fifth Procinct, on suspicion of being the thick. Subsequently Justics Hogan committed him for trial. is a native of Washington, D. C., and aged but 13 years.

AN ART JOURNEY.

ART IN PHILADELPHIA-JAMES HAMILTON. From Our Special Correspondent. PHILADELPHIA, August, 1866.

I wrote you, the other day, an account of my visit t Mr. Sully. His is a name well known throughout the country, but, to-day, I have to write about a man far less known; a younger man, a Philadelphian, whose pictures are scarcely to be seen out of this city. Here, indeed, they abound; here everybody knows James Hamilton's work; it is praised, criticised, ridiculed, imitated and bought. But, in New-York, I, for one, had never heard his name. His pictures may, once or twice, have been in the Academy, but I have never seen them; the Academy, being "National," snubs everything that comes to it from abroad, and has made Hamilton no exception to that generous treatment by which the impression has been created, and is steadily festered, that there is no art in the United States outside of New-York City. And yet Hamilton is one of the ablest men we have in landscape, one of the most studious, original and industrious. His productiveness is immense; I doubt if many of our men can show anything like such a mass of work, and its variety can have but one explanation-that it is the fruit of a constant study of I took a letter of introduction to the artist from Mr. John

Sartain, the well-known engraver, at whose house I sawan

carly picture by Hamilton which impressed me strongly. He would, I dare say, disclaim it now, because his way of painting has changed greatly since that day; but his objection would hold only so far as the execution, the method of painting, is concerned. This was, certainly, a bad method. When I told him I had seen the picture, "Oh, yes," he answered, "that was painted long ago. There are 20 pictures under that one. But I have given all that up." I believe Hamilton was in earnest when he said there were twenty pictures underneath the one I saw, and the same is true of many of his earlier pro-ductions. He would begin a picture on a certain theme, and work away at it for a time, but, becoming dissatisfied, or losing the glow of his first intention, and finding himself strongly impressed with some other aspect of nature, he would begin to alter here and there, to paint out, to paint anew, until, little by little, the first picture would disappear entirely; sunrise would pass into midday, afternoon into evening and night, land to sea, deep ocean to shore, and thus, from change to change, until the paint would stand so thick upon the canvas that it must be manipulated with the palette knife, and became, as we ay say, no longer painting but modeling. To look at Hamilton is a dashing, careless painter, throwing his colors to left and right, and letting things come thing, and Hamilton is self-limited. Turner has painted soften to first and night, and weight and could be more did.
Out at they will. But nothing could be more did.
Out at they will. But nothing could be more did.
Out at they will. But nothing could be more did.
Out at they will. But nothing could be more did.
Out at the wood express, and carry tery tilts as to he be expressed it—that his thought should, somehow, got itself uttend being to him the main consideration, the more its work often looks strange, unreasonable, freally, it upests our theories, it opposes our conventional notions with what looks like berardo, and it obliges us to find to death. Next people, clean people who like it as he should not an other of the people will be the should not be should out as they will. But nothing could be more mistaken. He is a fastidious painter, not easily satisfied,

little adapted to promote hilarity as any I know of. One is, to been the white wooden window shutters rigorously closed. except in cases of death, when they are "bowed," as it is called, that is, opened a little way, but prevented from too great concessions to the sun and air by being tied together with weepers of black, of whatever material the purses of the disconsolate survivors can afford. Shoe-strings have been known to be resorted to in cases where grief has had to wage an unequal struggle between impecuniosity and that yearning for respectability which is a part of the Philadelphian's religion; but such an attenuation of mourning is only allowed in desperate cases. I understand, however, that applicants for cold victuals at basement doors are always ready to follow up unsuccessful demands with potitions for old cravats and belt-ribbons, and that when beggars are so happy as to secure a dead relative they manifest their desolation by a profuse display of these east-off articles on their shutters. Be this as it may, there seemed to have been an unusual mortality in the streets through which our car wormed its way into the Frankford road, and a consequent display of weepers that at length had all the effect of an audible groan, a result not very surprising, with a weeper at every window of a four-story bouse, and an extra one at the bell-pull, and I was not at all taken aback on alighting and asking a passer-by to be directed to Mr. Hamilton's house, at being told that it was the one next door to where there was going to be a funeral.

However, all such gloomy notions were soon chased away on finding myself in the artist's painting room, which was in a state of litter delightful to behold, and the very opposite of Mr. Sully's. The canvases are stacked against the walls so deep as to leave only a narrow alley by which to reach the front of the room, where stands the easel holding an unfinished picture, and a sofa where Mr. Hamilton soated me while he showed me his sketches of Niagara, of which I had heard so much. I suppose that not a quarter of these fifty or sixty studies will ever be made into finished pictures; but, if they could be exhibited in a gallery by themselves, it would be seen how imperfectly any of the "Views" of Niagara represent the Falls in the variety of their terrible and beautiful aspects. By the side of these truthful, powerful studies only two other representation that I know hold their own; Church's "Rapids of Niagara," and John Henry Hill's view from nearly the same spot as Church's-a drawing which Church once said-and he is chary of praise-is as good as his own. But, Church's one, and Hill's one, against Hamilton's without end! He brought them out, one after another in his rapid eager way, now explaining this, now dilating upon that; here pointing out some wonder subtly indicated and easily escaping the eye; now turning over the pile with impatience to get at a sketch that made some peculiarity in the structure of the shore or the movement of the water easier to understand, or running back to restore the connection with one already seen; showing such an intimacy with the Falls in every part, and under all aspects of the seasons, and day and night, such an enthusiistic delight in them, and yet such a scientific understanding of thom, as made me, to paredy Tennyson—"Learn more from him in a single hour, than if my brain-pan were an empty hull, and every guide tumbled a guide-book in!"

Almost I heard the waters roar, and saw them spin and toss and whirl; what with Hamilton's talk, and the continuous stream of sketches, I felt as if I had seen Niagara in a dream. I am glad that so strong a man has thrown himself into the opposing ranks to the realists, though the opposition is only seeming, and I only regret that his work cannot be seen here in New-York, where the love of nest and elaborate landscapepainting is becoming so strong that it threatens to reduce the art to a level with prune-box decoration. If Farrer is to be opposed; if the Hills are to be disputed, I shall be

glad to see the other side of the question sustained by a man of equal knowledge, of equal skill. The men of our

Academy-Gifford, Hubbard, Haraltine, McE.

not able to take up a gauntlet thrown down so vigorously as it has been by our realists; they are themselves coquetting with realism, and, apparently, striving to emulate the finish they deery. La Farge and Vedder and C. C. Coleman are committed to the ideal school, and have shown some fight; but they are not productive enough to make a deep impression. La Farge has, indeed, painted so little that it is hard to say what he can do; Vedder is at a stand-still, and has already begun to imitate himself, and has, beside, shown no fertility in invention. C. C. Coleman, the strongest of these men, is stronger with his realism than with his idealism, and apparently believes more in it. Hamilton throws " realism," as Farrer and W. T. Richards interpret it, overboard, with all the strength there is in him, and scorns it utterly; but, for all that, he is a realist in his own way, and belongs to the new school by the same logic that puts Turner there—that makes Turner the great modern head of the school. A writer in the "Atlantic," once, engaged in the some-

what hopeless task of making out that Miss Hosmer's "Zenobia" was as good as anything the Greeks have left us, offered to give one of Turner's finest pictures to any-body who would show that Turner had any right to be classed with the Pre-Raphaelites-an unmeaning name, which I wish we could get rid of. I have no ambition to earn the prize, which, beside, does not lay in the generous gentleman's power to give, but nothing could be ensier than to do so. The whole gist of the Pre-Raphaelite theory lies in the artist's absolute dedication of himself to nation He is to study her, to follow her teaching, to accept her decision against the whole world of controlsseurs, dilletanti, writers of maxims. Methods are of no importance. Truth writers of maxims. Methods are of no importance. Truth to nature is the watchword, and Turner is the high-priest of the school, because he is supremely true to nature, because he studied her with a plodding industry that never tired, with a zest that was never quenched, with a purpose that was never balked. He followed no lead, thrust control solid heaving drained it day, and gave such an importance of maxims, which quickly rotted to pieces, until it can be have to speak.

This material is worked very much like potter's clay for earthenware—the clay is kneeded, shaped into the proper torms, dried, and then baked in the hottest of hot fires, until it comes from the kin as hard as stone itself.

This carries which quickly crumbed a way, and of week the prices. of the school, because he is supremely true to nature, be-cause he studied her with a plodding industry that hever tired, with a zest that was never quenched, with a purpose that was never balked. He followed no lead, thrust conthat was never balked. He followed no lead, thrust convention aside, having drained it dry, and gave such an impulse to art as has never before been given by a single man. His method was his own—and he had a dozen methods, a hundred, a method for every picture. So is glorious Frank Leighton's method his own, and Rossetti's his, and Millais, Hunt, Lewis, Hughes—where is there any likeness between the works of these men! Leighton is the very antipodes of Millais, but yet they are one in their rejection of convention, of dictation, in their perception of the essential, in their determination to express it.

So, in a lower degree, I claim Hamilton as belonging to the advance guard in spite of his apparent difference from the realists among us. Not that I do not think his pictures suffer from the lack of minute study. On all sides you hear his name linked with Turner's; sometimes in praise, sometimes in dispraise; but Turner could do everything, and Hamilton is self-limited. Turner has painted stormy seas as no man beside ever painted them, but he has also painted shells and fish as they have rarely been painted. If he resembles Shakespeace in the wide range.

The clay is what is not unfrequently known as "from the lack of minute study. On all sides you hear his name linked with Turner could do everything, and Hamilton is self-limited. Turner has painted stormy seas as no man beside ever painted them, but he had a dozen in the retail of the purpose of conducting drinking-water for long distances it is unit, for the reason that, even all other varieties, the metal pipes being by far too expensall other varieties, the metal pipes all other varieties, the metal pipes heing by far too expensall other varieties, the metal pipes heing by far too expensall other varieties, the metal pipes heing by far too expensall other varieties, the metal pipes all other varieties, the metal

has also painted shells and fish as they have rarely been painted. If he resembles Shakespeare in the wide range

satust, which certainly is provincial, will be outgrown, as that of Ling and Resulter and Hicks has been with us. Our figure-positives are rare, and we have, until lately, and nothing with which to compare them, but the day is not distant when, beside rejecting the bad, we shall do better—we shall produce the good. Already, indeed, that day has dawned, and Eastman Johnson, Window Homer, J. G. Brown the Robert of the chooses, Gay (when he has a mind) and Velden if he chooses, Gay (when he has a mind) and Velden if he cally would are ragional, rep lating, such as Robbert mel inflicts upon us, impossible much longer. In land cape we held are ground, reg. I think James Hamiltons best pictures, if they were not lab! in centers, but were put where their power could he felt and make it is do impossible to the proposed of the strain of th that of Lang and Rossiter and Hicks has been with us. Our figure pointers are rare, and we have until lately, had

In some cases money was made each time, in others not. As a general thing the first prices do not cover cost and expenses from the West. One drove of 100 fair-fleshed Hilinois steers, which cost 7c. a little beyond Chicago, where they weighed 1,216 lps., lost the owner three hundred dollars. The expenses of freight and feed up to the time 5. fc. hing the yards was 615 per head to which about 65 per head more was Added not commission for selling, yardsge, &c. Fair 7.cwt. Illinois steers brought 102 ldfc. to day, while good fat cattle sold at 174 2180 — some at the latter price on the scales. Owing to a scarcity of first class cattle his grade brought amount as hast west, but common and poor were ivide, lower with little prospect of selling out. One of the hardest selling lots was a drove of two and three year old State bolls, about 9 cwt, gross, which the owner was getting rid of very slowly at \$100 \$15 per head, or less than 160. b h. These bors a striking contrast to a choice drove of fix Kantnoby grade Durhams wholesaied at \$15 ach its more ling—and there is very little change in prices from last week. Most of the stock is common, solling at 6; 27c., when weighed, but large numbers are run out at \$3 50 ab per head. One of the best lots on sale—400 head good 95 fb Indians sheep—sold for 7(c., with 30 culls out. Lambs are not doing as well. Butchers say they are worth but little more than sheep. Still, for a right good lot 2c. can be had, but that is the top price. From this they run down to 7(c., and many lots remain on the market unsaid.

Twenty-nine cars of hogs were on the market this morning, and up to 2 o'clook p. m. ten cars remained unsold. Prices ranged from 10g will lite—the latter price only for prime fat hogs.

New Corron.-The first bale of the new crop of cotton received in this city from the South arrived yesterday, on the steamer Mariposa, from New Orleans, consigned to Means. Watta, Cram & Co. Those interested will be pleased to learn that in excellence of quality and beauty of staple it ornaises wall for what will follow. DRAIN PIPES.

Mow They are Made, and What They are Use. The knowledge which has been elaborated by scientific

research and by careful comparison of the views and experiences of practical men who make little pretension to bookcarning, and which has, for the past twenty years, been most intelligently applied to the perfection of Agricultural Science, has in no one particular wrought a greater revolution in a small way than in the matter of drainage. In the good old days of our fore-grandfathers or grand forefathers, a farmer would about as soon have thought of spending money for draining his low lands, as for some patent machine to spin and weave the wool on the backs of the live sheep, and shear it off in the shape of ready-made blankets and breeches. As nature had made the swamp, of course it was only right to keep it sacred to the production of hily-pads, cowalips and cel-grass, and the reproduction of bullfrogs. But in time a certain degree of light penetrated the skulls of the farmers, and they began gradually to sas that every acre redeemed from the bullfrogs was an acre added to the meadow or the wheatfield. When matters got to this pass, the work of regeneration was spebegun, for a farmer's head can readily comprehend that wheat at a dollar a bushel is a far more profitable crop than builfrogs at nothing a cord. The moment this great fact was understood, that instant every farmer whose farm was cursed with wet land began to drain that said lend and get it into a proper form for cultivation. Then the round was quickly ran of open drains, which quickly clogged up, of brick drains, which quickly crumbled away, and of wooden

simple "potter's wheel," and fashioned only by fingers of the clay-daubed workman.
The pipes are made of different distinctors, though for the most part always in lengths of two feet. There are s-few lengths of three feet, though but very few. The

Bends, elbows and branches, per foot: Two ined, 30c.; 3 inch, 60c.; 4 hinh, 50c.; 5 ined, 60c.; 6 ined, 0c.; 8 ined, 90c.; 9 ined, 61; 13 ined, 61 45.

Now that agriculture has really engaged the attention of scientific men, and that proper and economical drainage is studied in farming as a means of wealth, and in cities as a prime necessity of health, this comparatively new manafacture must take its place as one of the most important in the county.

THE NICHOLSON PAVEMENT.-The Common Coun-

cil passed a resolution some months ago authorising Mr. Jonathan Taylor of Milwaukee to construct, as an experiment Jonathan Taylor of Milwankee to construct, as an experiment one block of the "Nicholson" wood parement, and chose Nasson-st. between Pine and Walletss., as the place. The parement consists of oblong blocks of Wilmington pine, about eight inches by twelve, and placed with the grain uppermost. These blocks are placed upon a floor of inch boards, previously laid upon a grade of three inches crown, and are dipped in boiling tar before being placed. Between them narrow strips of board are placed, half as high as the blocks: then boiling tar and grave lift the remaining space. The Nicholson parement has been used for ten years in Chicago and seven in St. Louis, and is by using satesmed the best in the world.